

# EUROPEAN PATENT OFFICE

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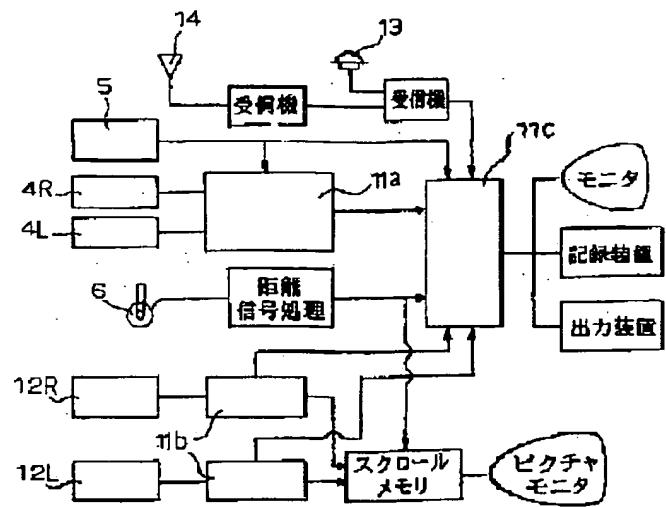
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TITLE : DATA GATHERING DEVICE FOR  
 DIGITAL ROAD MAP



ABSTRACT : PROBLEM TO BE SOLVED: To provide the data gathering device of a digital road map, capable of grasping positions of traveling vehicles for every traffic lane on a road surface having the shape of a three-dimensional road surface with high accuracy.

SOLUTION: The rolling angle and the pitching angle of a vehicle, distances of both sides in the width direction of the vehicle to respective road surfaces and the distance in the advancing direction of the vehicle are respectively detected by respective sensors 5, 4, 6 at every predetermined prescribed interval and also various measurement data detected by respective sensors are sampled to be inputted to an arithmetic unit 11 and a traversing gradient operation and a longitudinal gradient operation in a road prolongation direction are repeatedly performed. Highly accurate traveling vehicle positional data are gathered in three dimensions by overlapping vehicle positional data of a traffic unit with respective detection data from partition line sensors 12, a GPS 13 and a beacon 14 for every operation.

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